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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ULRICH SINN

Appeal 2009-002520¹
Application 10/788,471
Technology Center 2600

Decided: January 25, 2010

Before ALLEN R. MACDONALD, *Vice Chief Administrative Patent Judge*,
and JOHN C. MARTIN and MARC S. HOFF, *Administrative Patent Judges*.

MARTIN, *Administrative Patent Judge*.

DECISION ON APPEAL

¹ The real party in interest is Siemens Aktiengesellschaft.

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1-15, which are all of the pending claims.

We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

A. Appellant's invention²

Appellant has invented a method and apparatus for transmitting data between a mobile radio transmitter and a radio receiver of a machine or plant. Specification ¶ 002.

Appellant's method for data transmission provides a first radio link between a radio transmitter and a radio receiver of the machine/plant for transmitting safety related information and a second radio link for transmitting non-safety related information. *Id.* ¶ 007. The use of two separate radio links ensures that safety related information can be transmitted and received without being blocked or impaired by non-safety related information. *Id.*

B. The claims

The independent claims before us are claims 1, 14, and 15, of which claim 1 reads:

² References herein to Appellant's Specification are to the Application as filed rather than to corresponding Patent Application Publication (Continued on next page.)

1. A method for transmitting information data between a mobile radio transmitter and a radio receiver of a machine or plant, comprising:
 - providing a first radio link between the radio transmitter and the radio receiver for transmitting safety related information data; and
 - providing a second radio link between the radio transmitter and the radio receiver for transmitting non-safety related information data;
- wherein the first radio link and the second radio link are two physical channels that contemporaneously transmit the information data in parallel.

Claims App. (Br. 13.)

*C. The references*³

The Examiner relies on the following references:

Kraus et al. (“Kraus”)	US 6,893,395 B1	May 17, 2005
Litwin, Jr. et al.	US 7,073,083 B2	July 4, 2006
Menard	US 7,103,344 B2	Sep. 5, 2006

D. The rejections

Claims 1-4, 9-12, 14, and 15 stand rejected under 35 U.S.C. § 102(e) for anticipation by Litwin. Final Action 3.

Claims 5-8 stand rejected under 35 U.S.C. § 103(a) for obviousness over Litwin in view of Kraus. *Id.* at 7.

2004/0224641 A1.

³ Because the availability of the reference patents as prior art against Appellant’s claims is not at issue, only the issue dates are provided.

Claim 13 stands rejected under 35 U.S.C. § 103(a) for obviousness over Litwin in view of Menard. *Id.* at 8.

Appellant argues the merits of only the anticipation rejection of the independent claims.

THE ISSUES

Appellant has the burden on appeal to show reversible error by the Examiner in maintaining the rejections. *See Gechter v. Davidson*, 116 F.3d 1454, 1460 (Fed. Cir. 1997) ("[W]e expect that the Board's anticipation analysis be conducted on a limitation by limitation basis, with specific fact findings for each *contested* limitation and satisfactory explanations for such findings.") (emphasis added); *In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness." (citation omitted)).

The issues before us are:

(1) Whether Appellant has shown that the Examiner erred in reading the recited "safety related information data" on the command and address that are transmitted on Litwin's auxiliary channel 108; and

(2) Whether Appellant has shown that the Examiner erred in finding that Litwin's data channel 106 and auxiliary channel 108 transmit "contemporaneously."

THE ANTICIPATION REJECTION

Litwin discloses a method and system for providing emergency shutdown of a malfunctioning device. Litwin, col. 1, ll. 7-10.

Figure 1 of Litwin is reproduced below.

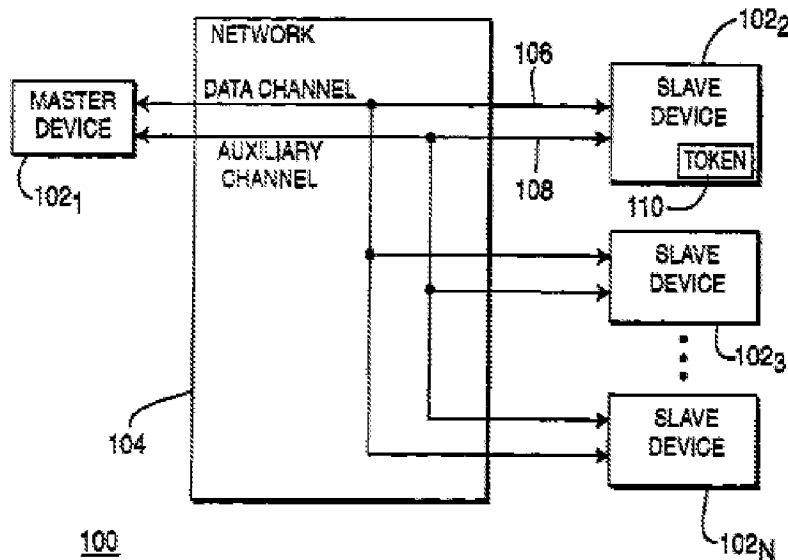


FIG. 1

Figure 1 depicts a block diagram of a system 100 having a plurality of devices 102₁, 102₂, . . . , 102_N (generally referred to as devices 102) sharing a network 104. *Id.* at col. 2, ll. 7-9. The network 104 comprises a data channel 106 for the transmission of data among the devices 102 and an auxiliary channel 106 for the transmission of an “emergency signal” to the devices 102. *Id.* at col. 2, ll. 11-14. The devices 102 can comprise, for example, wireless modems to transmit data to and receive data from data channel 106. *Id.* at col. 3, ll. 25-27.

In one embodiment, data channel 106 and auxiliary channel 108 use different frequencies carried via a common physical medium. *Id.* at col. 2, ll. 14-17. In the embodiment depicted in Figure 1, device 102₁ is configured as the master device, and the other devices are configured as slave devices (each sometimes referred to as slave device 102_N). *Id.* at col. 2, l. 65 to col. 3, l. 1.

Devices 102 operate in a shared media environment, i.e., only one device 102 may transmit data over the data channel 106 at any given instant in time. *Id.* at col. 2, ll. 22-30. To prevent contention in the network 104, “each device 102 must receive permission or authorization to transmit data via the data channel 108 [sic: 106].” *Id.* at col. 2, ll. 36-39 (emphasis omitted). In one embodiment, a device 102 must receive a token 110 as a condition for transmitting data via the data channel 106. *Id.* at col. 2, ll. 39-41.

Each of the devices 102 may be subject to a malfunction, such as a hardware malfunction (e.g., a defective transceiver) and/or a software malfunction (e.g., poorly written code). *Id.* at col. 2, ll. 42-45. A malfunction can, for example, cause the device 102 to continuously transmit data via the data channel 106. *Id.* at col. 1, ll. 32-34; col. 2, ll. 45-47.

In the embodiment depicted in Figure 1, master device 102₁ monitors data channel 106 to determine whether any slave device is malfunctioning. *Id.* at col. 3, ll. 29-31. For example, if one or more of the slave devices 102_N are configured to transmit data during specific time slots in, for example, a TDMA (time division multiple access) manner, the master device 102₁

determines whether any slave device 102_N is transmitting data outside of its assigned time slot. *Id.* at col. 3, ll. 31-36.

Once the malfunctioning slave device 102 is identified, master device 102₁ transmits an emergency signal via the auxiliary channel 108 to the identified slave device. *Id.* at col. 3, ll. 50-52. In one embodiment, the emergency signal contains a network address of the identified slave device 102_N and a command for the identified slave device 102_N to perform an emergency shutdown. *Id.* at col. 3, ll. 54-58. The slave device 102_N can reset, e.g., turn off and on, in response to the emergency signal, e.g., a shutdown signal. *Id.* at col. 3, ll. 58-60.

The Examiner, comparing claim 1 to Litwin, reads the recited “first radio link . . . for transmitting safety related information data” on auxiliary channel 108 and reads the recited “second radio link . . . for transmitting non-safety related information data” on data channel 106. Final Action 4. In an Advisory Action, the Examiner further found that “Litwin explicitly teaches that the emergency shutdown signal may contain a network address of the identified device and a command for the identified device to perform an emergency shutdown (see Litwin, col. 3, lines 55-57).” November 13, 2007, Advisory Action (hereinafter “Advisory Action”) at 8. Appellant argues that “the shutdown command and the address to which the command must be transmitted fail to teach or suggest the claimed transmission of safety-related information data (i.e., the network address is not information ‘data’).” (Br. 10.) This argument is unpersuasive because it is not supported by any evidence demonstrating that the claim term “information

data” cannot reasonably be read on the network address of the identified device, or the shutdown command, or both.

Regarding the requirement of claim 1 that transmission occur on both radio links “contemporaneously,” the Examiner found that “Litwin fig. 3 teaches the malfunctioning slave device transmitting data via data channel 106 while the master device transmitting emergency shutdown data via auxiliary channel 108 (see Litwin, col. 5, lines 40-45 and 48-51).” Advisory Action 8.

Litwin’s Figure 3 is reproduced below.

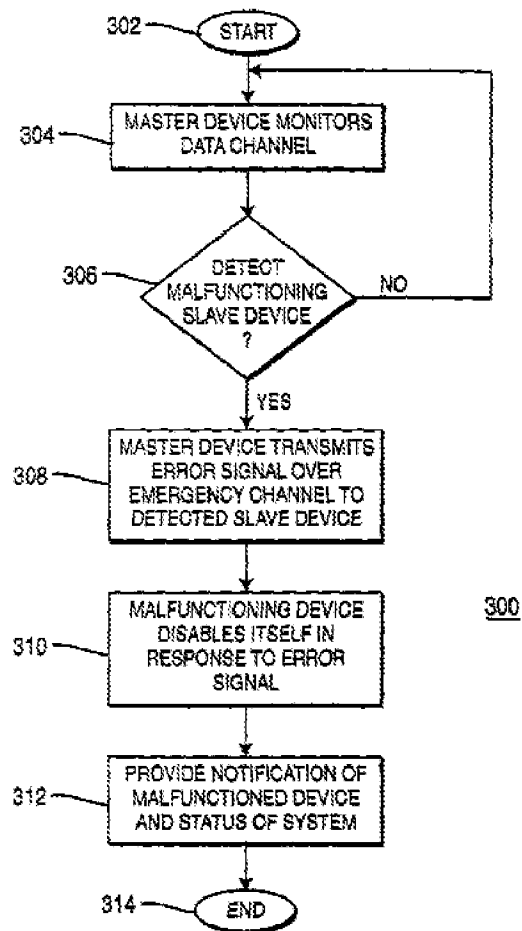


FIG. 3

Figure 3 depicts a flow diagram of a method 300 for providing emergency shutdown in one embodiment of Litwin's invention. Litwin, col. 5, ll. 32-34. In step 306, master device 102₁ determines whether any of the slave devices 102_N is still transmitting data to the data channel 106 without having authorization from the master device 102₁. *Id.* at col. 5, ll. 38-39. For example, a malfunctioning slave device 102_N may still be transmitting data over the data channel 106 after its assigned token or time slot has expired. *Id.* at col. 5, ll. 43-45. If a malfunctioning slave device

102_N is detected, method 300 proceeds to step 308, where the master device 102₁ “transmits an error signal over the auxiliary channel 110 [sic: 108]” to the defective (i.e., malfunctioning) slave device. *Id.* at col. 5, ll. 48-52.

Appellant argues that “the cited portion of Litwin merely indicates that if the master device determines a malfunctioning slave device, i.e., a device that transmits data over data channel 106 after its time slot has expired, the master device transmits the command signal to shut down the slave device.” (Br. 11.) It is true that Litwin does not state that the error signal is transmitted while the defective slave device is still (improperly) transmitting on data channel 106. However, the Examiner is justified in finding that “contemporaneous” transmission occurs when, as explained by Litwin and noted by the Examiner (Answer 10), the malfunction is of a type that causes the device 102 to “continuously” transmit data on data channel 106 (Litwin, col. 1, ll. 32-34; col. 2, ll. 45-47), which we understand to mean that the malfunctioning device continues to improperly transmit until it shuts itself down in response to receiving an error (i.e., shutdown) signal on auxiliary channel 108. We note that Appellant’s remarks in the Reply Brief (at 5) concerning the Examiner’s reliance on the term “continuously” are not responsive to the Examiner’s rationale. Instead, the Reply Brief argues:

On page 10 of the April 7, 2008 Examiner's Answer, the Examiner refers to the term “continuously,” where such term was previously deleted from claim 1. The Examiner does not appear to imply that the Appellant presented any arguments regarding a “continuous” transmission. For clarity reasons, however, Appellant submits that the February 29, 2008 Appeal Brief in no manner attempts to distinguish over the Litwin

reference by presenting any arguments related to a “continuous” transmission of data.

(Reply Br. 5.)

Inasmuch as Appellant has not shown error in the Examiner’s finding that Litwin anticipates claim 1, we are sustaining the anticipation rejection of that claim as well as the anticipation rejection of independent claim 14 and 15, as to which Appellant relies on only the claim 1 arguments. (Br. 11.)

The anticipation rejection of dependent claims 2-4 and 9-12 over Litwin is sustained because Appellant treats those claims as standing or falling with claim 1. (Id. 11.)

The rejections of dependent claims 5-8 and 13 for obviousness over Litwin in view of the other cited references are sustained because Appellant treats those claims as standing or falling with claim 1. (*Id.* 11-12.)

DECISION

The rejection of claims 1-4, 9-12, 14, and 15 under 35 U.S.C. § 102(e) for anticipation by Litwin is sustained.

The rejection of claims 5-8 under 35 U.S.C. § 103(a) for obviousness over Litwin in view of Kraus is sustained, as is the rejection of claim 13 under § 103(a) for obviousness over Litwin in view of Menard.

The Examiner’s decision that claims 1-15 are unpatentable over the applied prior art is accordingly affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). *See* 37 C.F.R. § 1.136(a)(1)(v) (2009).

AFFIRMED

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